

ABSTRACT OF THE INVENTION

There is provided a system and method of rate responsive pacing, having
5 an intrinsic QT rate sensor. The system has the capability of sensing the QT
interval of intrinsic cardiac signals and constructing from such intrinsic QT data a
QT reference curve. The QT reference curve is used for comparison with beat-
to-beat QT interval data, in order to provide sensor information for controlling
pacing rate. The system of this invention preferably utilizes DSP circuitry for
10 determining the occurrence of a Twave event and the timing of the Twave, from
which the QT interval is calculated. The system also provides for compensation
of any QT interval which is calculated following ventricular pacing, so that the QT
sensor is operative at all times and throughout the entire rate range experienced
by the patient. The system thereby provides an enhanced QT rate responsive
15 pacing arrangement, and avoids the need of overdrive pacing in order to obtain
QT reference data.